

REMARKS

The specification amendments correct minor informalities.

Independent claims 1 and 7 have each been amended to more clearly recite the locations of the resistor heating elements and the locations of the temperature measuring devices. As now claimed in amended claims 1 and 7 the heating elements and the temperature measuring devices are each located within the respective sidewalls, bottom wall, and roof of the temperature equalization zone. That structural arrangement is shown in drawing Figures 1, 2, and 3, and is described in the specification at page 4, lines 22 through 24, for the heating elements, and at page 4, lines 29 through 31 and at page 5, lines 1 through 4, for the temperature measuring devices.

Claims 1 through 4, 6 through 9, and 11 were rejected as obvious based upon the Monks et al. and Jung references. In that regard, although the Monks et al. reference discloses a melter for a glass-melting furnace, it discloses only the overall structure of the melter chamber. That reference does not disclose any temperature measuring means, nor does it disclose where such measurement means might be located relative to the melter structure, nor does it even mention temperature measurement.

The Jung reference discloses an electric furnace in the form of a chamber within the interior of which are positioned heating devices and temperature measurement devices. The heating devices and the temperature measuring devices are each positioned near the pieces to be heated, not within the furnace walls and not on the roof, walls, and floor of the furnace, as

suggested by the examiner. Instead, the heating devices and the temperature measuring devices are each positioned within the interior volume of the furnace that is defined by the respective furnace inner wall surfaces (see Jung, drawing, col. 2, lines 25 through 29, and col. 4, lines 35 through 38).

In view of the disclosures contained in the Monks et al. and Jung references, there clearly is no teaching in either reference of providing resistor heating elements within the interior of the walls of a furnace or of providing temperature measuring devices within the interior of the walls of a furnace to measure the surface temperatures of the surfaces that are contacted by the heating elements. Accordingly, the combination of Monks et al. and Jung neither teaches nor suggests the invention as it is claimed in currently amended independent claims 1 and 7, and therefore those claims are urged to be patentably distinguishable thereover. And because claims 2 through 4, and claim 6 depend directly from claim 1, and because claims 8, 9, and 11 each depend directly from claim 7, each of those dependent claims is similarly distinguishable over the teachings of the Monks et al. and Jung references.

Claims 5 and 10 were rejected as obvious based upon a combination of the Monks et al., Jung, and Thomson references. Thomson was cited as showing band heaters, but it instead discloses a wound heater structure (see Thomson, page 1, lines 74 and 75) that is defined by wire windings that connect with a secondary winding of a transformer. Additionally, the wound heaters are carried on the outer surface of outer insulating layer 3 (see Thomson, Page 1, lines 70 through 75), not within the side wall of tubular portion 1.

Moreover, Thomson does not disclose either temperature measurement or the location of temperature measuring devices. And because claims 5 and 10 depend directly from claims 1 and 7, respectively, claims 5 and 10 are patentably distinguishable over the combination of the Monks et al. and Jung references, and in view of the foregoing distinctions also the combination therewith of the Thomson reference.

Based upon the foregoing amendments and remarks, the claims as they now stand in the application are believed clearly to be in allowable form in that they patentably distinguish over the disclosures contained in the references that were cited and relied upon by the examiner, whether those references be considered in the context of 35 U.S.C. § 102 or of 35 U.S.C. § 103. Consequently, this application is believed to be in condition for allowance, and reconsideration and reexamination of the application is respectfully requested with a view toward the issuance of an early Notice of Allowance.

The examiner is cordially invited to telephone the undersigned attorney if this amendment raises any questions, so that any such question can be quickly resolved in order that the present application can proceed toward allowance.

Respectfully submitted,



Alfred J. Mangels
Reg. No. 22,605
4729 Cornell Road
Cincinnati, Ohio 45241
T l.: (513) 469-0470

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